

ABSTRACT

5 There are provided microorganisms having a property
of producing a lipid containing unsaturated fatty acids
as constituent fatty acids and extracellularly secreting
the produced lipid encapsulated in lipid vesicles,
methods of screening said microorganisms, as well as
methods of efficiently producing a fatty acid-containing
lipid using said microorganisms. Furthermore, there are
10 provided lipid vesicles encapsulating a lipid containing
unsaturated fatty acids, and foods, cosmetics, and animal
feeds comprising said lipid vesicles added thereto.

Artificially treated microorganisms or
microorganisms collected from nature are grown on a solid
15 medium, and microbial strains that form lipid vesicles at
the periphery of the colonies and/or microbial strains
that, when cultured in a transparent liquid medium, make
the culture liquid cloudy are selected. The
microorganisms obtained are cultured, lipid-containing
20 lipid vesicles secreted in the culture liquid, are
separated from the culture liquid, and the lipid is
separated and purified.

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(54) Title: MICROORGANISM SECRETING OUT LIPID AND PROCESS FOR PRODUCING THE LIPID AND LIPID BALLS HAVING THE LIPID ENCAPSULATING THEREIN BY USING THE MICROORGANISM

(54) 発明の名称: 脂質を菌体外に分泌する微生物ならびに当該微生物を用いた脂質および脂質を内包する油滴小胞の製造方法

(57) Abstract: A microorganism characterized by producing a lipid constituted by unsaturated fatty acids and secreting outside the cells the thus produced lipid in the form of lipid balls having the lipid encapsulated therein; a method for screening this microorganism; a process for efficiently producing the lipid containing the unsaturated fatty acids by using this microorganism; lipid balls having the lipid containing the unsaturated fatty acids encapsulated therein; and foods, cosmetics and animal feeds containing these lipid balls. Artificially treated microorganisms or microorganisms collected from nature are grown in a solid medium and a strain forming lipid balls around its colonies is selected, and/or grown in a transparent liquid medium and a strain causing cloudiness in the culture medium is selected. The thus obtained microorganism is cultured and the lipid balls having the secreted lipid are separated from the culture medium followed by the separation and purification of the lipid.

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